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ABSTRACT

A study was conducted to determine what knowledge and learning is developed through teamwork in business. Ten cross-functional teams selected from six major United Kingdom employers were surveyed, with structured interviews completed with 72 team members and team leaders and a short questionnaire completed by 50 of the interviewees. The study found that teams learn in these four ways: by direct transfer of knowledge or skills from other experts, by observation of others in action, by collective problem-solving and experimentation, and by consolidating prior experience and re-framing new insights. Team members learned about themselves, about the organization, and about other specialties within the organization. Impacts on the learning of a cross-functional team include explicit consideration of learning for the individual and the organization; the positive attitude of an individual member's home function and the level of interaction across boundaries with the rest of the organization; diversity within the team; the degree of close working and interaction; and using team processes for learning and honest discussion of difficulties. The study concluded that cross-functional team learning can be enhanced by moving people and their talents into and out of teams and back into the mainstream organization; coaching and learning to support individual members; facilitating relevant team development and training; realigning human resource systems; and developing the team as a learning community and transferring the team's skills to the rest of the organization. (Contains 27 references.) (KC)

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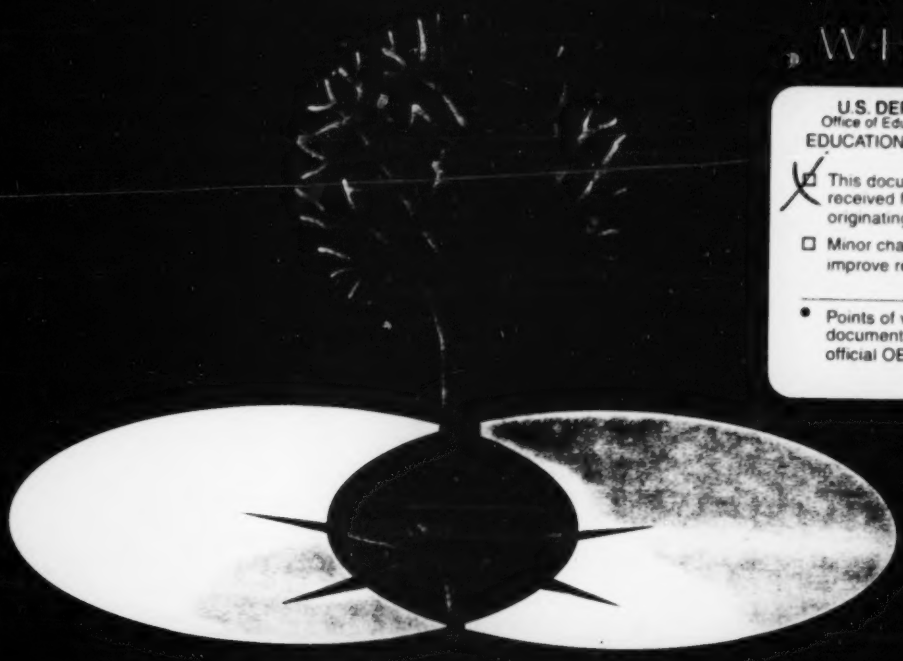

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Learning from Cross-functional Teamwork

P Kettley
W Hirsh

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Executive Summary

Cross-functional teams as an important source of learning

Organisations, in both the private and public sector, are increasingly team based. Programmes, projects, taskforces and working groups are how things get done. At the strategic level, organisations are concerned to position themselves in the knowledge economy and turn their employees' know-how into a managed asset. But organisational learning has largely been hijacked by IT, in the guise of 'knowledge management', and employers are struggling to address the human issues associated with knowledge creation and exchange. The reality is that the majority of knowledge sharing and innovation within organisations occurs through people interacting with people – especially within networks, groups or teams that cross conventional organisational boundaries. In that sense, cross-functional teams represent the 'coalface' of organisational learning.

Surprisingly, despite the vast amount written about traditional teams, the creation of knowledge and learning out of team-working has received little attention to date. The corporate members of the IES Research Club decided, therefore, to sponsor this study.

The IES study

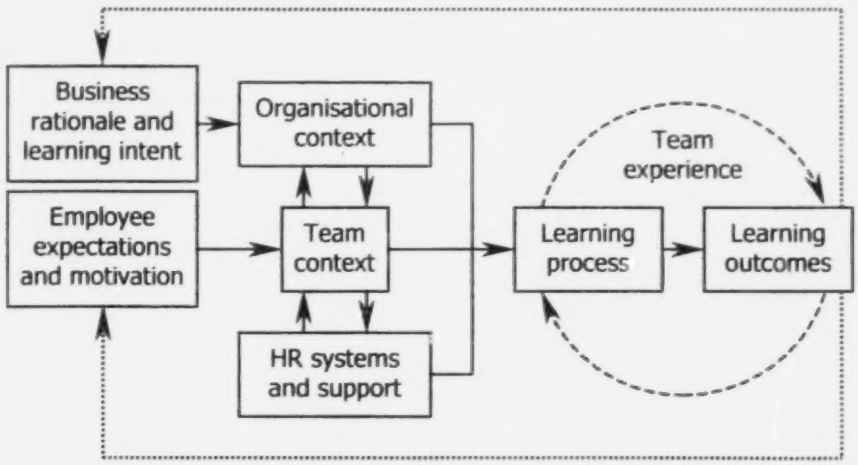
A total of ten cross-functional teams selected from six major UK employers took part in the research. Structured interviews were completed with 72 team members and team leaders. In addition, interviewees were asked to complete a short questionnaire to which we had 50 responses.

IES research explores the following key questions:

- What does the organisation hope to achieve through cross-functional teamworking? What expectations does it have about knowledge creation, knowledge transfer and learning?
- What do the individual members of cross-functional teams expect to gain from this way of working? Do they have learning intentions when they join such a team?
- What do individuals actually learn? In what ways in this learning unique to cross-functional teamworking – could it have been gained in other ways? Are there other outcomes associated with their experience and what do individuals do with this new found knowledge/skill *etc.*?
- Is it possible to define the process of team learning? Are there preferred methods?
- Which contextual factors (*eg* organisational context, the team experience, and capability of the individual) enable learning within a cross-functional environment? Which seem to inhibit it?
- What practical guidance can this research offer employing organisations that wish to make the best use of cross-functional teamworking as a route to both individual and organisational learning?

Figure 1 shows in diagrammatic form the relationships between the different variables, of both context and process, that this study explores.

Figure 1: Influence of context and process



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The report is aimed chiefly at senior HR professionals, for it is their role in supporting the learning in and from cross-functional teamwork that is relatively underdeveloped and unused in many organisations. Senior line managers, team leaders and project directors may also find the report helpful in understanding what they can do to help teams work better and learn better.

Business rationale

What's different about cross-functional teams?

Cross-functional teams are typically composed of individuals who have a functional home base (*eg* engineering, personnel, marketing, *etc.*) but who work collaboratively on issues or processes requiring diverse resources. There are four key areas that distinguish cross-functional teamwork from more conventional teams:

- functional diversity
- competing identities
- integration in the organisational structure
- performance expectation.

Why use them?

The teams in the IES study had been introduced for one of the following reasons:

- innovation and new product/service development
- problem-solving across traditional organisational/functional boundaries
- integration of systems typically via process re-design/re-engineering
- co-ordination into a 'one stop shop' or a single point of contact or delivery.

Team types

The organisation often has an ill-defined expectation of what knowledge or learning it expects from a cross-functional initiative. There is, however, an important distinction between:

- those teams who are primarily concerned with cross-functional collaboration that in some way shapes the future of the organisation strategy and *development* of the business: refocusing the business after a major change; new product development; implementation of mergers, acquisitions and other corporate alliances. All require the building of a critical mass of people who can **generate new knowledge or synergistic learning** and commit around an emerging consensus.

and

- cross-functional teams who are responsible for largely *operational* business processes, such as the implementation and/or delivery of new integration or co-ordination methods. The emphasis is upon the **application and delivery of shared knowledge.**

Another dimension on which the teams in the IES study differ is:

- the extent to which they are *integrated* into the organisation's structure and business processes as a semi-permanent structure

or

- organised as a **parallel** and largely separate project.

These two dimensions (type of synergy and integration with the organisations' structure) provide a model by which the business rationale for cross-functional working can be mapped.

How does learning take place within the team?

The members of a cross-functional team seldom have an explicit expectation of what they might learn, nor are they always conscious of what they have learnt. Measuring both learning methods and outcomes is therefore difficult. The IES study does, however, illustrate how team members learn via four particular routes:

1. direct transfer of knowledge or skills from other experts
2. picking things up from observing diverse others in action
3. collective problem-solving and experimentation
4. consolidating prior experience and re-framing new insights.

The majority of survey respondents (43 per cent) perceive themselves to have learnt most from working closely with others

within the team. An appropriate mix of expertise in the team, and the capability of individual members to share and otherwise impart their knowledge, is a critical success factor in team learning.

What is learnt?

Cross-functional team experience is a powerful opportunity for self-development, even for those employees who commence membership with little or no learning intent. There are at least three definable categories or types of learning distinguishable from one another in terms of the knowledge and skills acquired by cross-functional team members. They are:

- **Learning about self**: *ie* enhanced personal effectiveness via generic interpersonal, interactive and communication competencies such as influencing others, handling conflict, listening, and feedback. In addition, people spoke of their team membership enabling them to quite fundamentally re-think themselves and their own motivations, work preferences, learning styles *etc.*
- **Learning about the organisation**: *ie* a better understanding of the interdependencies of different parts of the organisation and related processes (systems thinking); appreciation of the complexity of managing change and its implications for problem-solving and decision making; skills in identifying improvement opportunities and building shared vision; collaborative enquiry – clarifying (internal and external) customer requirements, *etc.*
- **Learning about other specialisms**: *ie* the acquisition or appreciation of particular functional or job competencies, and tools and techniques typically used by other specialisms/ functions. Individuals spoke of becoming familiar with the requirements of others' working methods, professional standards, regulatory requirements *etc.*

The team members interviewed, consistently reported that it was the 'softer' skills around their self-awareness and personal effectiveness that they had developed most. This was borne out by their responses to the survey, with 40 per cent ranking learning about self.

Key influences on learning

The IES study illustrates the impact of the organisational culture and systems in which teams exist (**organisational context**); the operating principles and dynamic of the team (**team context**), and their impact on the **team experience**, *ie* the learning process and learning outcomes. It shows how the context for cross-functional teams is complex and differs from that of conventional teams in that it includes hierarchical, lateral and inter-team dependencies that require continuous negotiation.

Some of the key contextual factors that directly impact upon the learning of a cross-functional team include:

- explicit consideration of learning for the individual and the organisation before, during, and after the team 'experience'
- the positive attitude of an individual member's 'home function' and the level of interaction across boundaries with the rest of the organisation. For example, employers will limit the potential of valuable learning if they impose arbitrary deadlines upon the team, and/or evaluate team and individual effectiveness by ill-considered performance measures.
- diversity within the team and autonomy to organise the work of the team. Team members should not be appointed and allocated responsibilities solely on the basis of their functional expertise.
- the degree of close working and interaction. Cross-functional teams benefit enormously from being co-located. Equally important is continuity and consistency of membership. Bringing in new blood now and again to refresh the team effort may seem a good idea, but it can undermine the team dynamic and levels of trust essential to team learning.
- using team processes for learning and honest discussion of difficulties.

Realising the potential

This study highlights a range of practical guidelines for employers who wish to fully exploit the potential of cross-functional teamwork for both individual and organisational learning. There are roles for multiple players such as HR, team leaders, senior sponsors and line managers in:

1. the resourcing or allocation of talent and skills to teams and their re-entry (and re-motivation) to the 'mainstream' organisation
2. coaching and learning support to individual members
3. facilitating relevant team development and training in, for example, team dynamics, group problem-solving techniques *etc.*
4. realigning HR systems, *eg* reward, performance appraisal, skills frameworks and career management
5. developing the team as a 'learning community', capturing and transferring knowledge gained to the rest of the organisation.

Prioritising where support is needed most requires a pragmatic evaluation of existing practices and experiences. Corporate HR functions who value the enormous potential contribution of cross-functional teamwork to their knowledge base ensure they know whether or not the cross-functional teams scattered around the organisation are as effective as they could be, and are receiving the right organisational support. IES works with leading employers to conduct effectiveness audits of this type.

1. Introduction

1.1 Background

Although few organisations would claim to be a pure 'project organisation' most, in both the private and public sector, are increasingly team based. Programmes, projects, taskforces and working groups are now the reality of how things get done by both senior and more junior employees. In IES' experience, the ability to work collaboratively with colleagues from other areas or functions, with different styles, skills and experience has become a key competence desired by employers.

At the strategic level, organisations are concerned to position themselves in the knowledge economy and turn their employees' know-how into a managed asset. Some employers are attempting to account for their 'intellectual capital' and apply it to their balance sheets. Many more have chosen to invest in IT based communication systems and databases. In fact the recent developments in 'knowledge management' focus largely on the creation of a technological infrastructure for the capture and dissemination of information. Recent criticisms have highlighted knowledge management's failure to pick up the 'learning organisation' baton and address the human issues associated with knowledge creation and exchange. For example, IT driven approaches are supply driven: that is, they focus on making knowledge and skill more widely available, assuming that people will be willing to share their knowledge and use the information provided (Scarbrough, 1999).

The reality is that the majority of knowledge sharing and innovation within organisations occurs through people

interacting with people – especially within networks, groups or teams of people who cross conventional organisational boundaries. In that sense, cross-functional teams represent the 'coalface' of organisational learning and knowledge management. The link, however, between the prevalence of teams and organisational learning or knowledge management is relatively unexplored. IES believes that a better understanding of the learning processes associated with cross-functional team experience would provide an important, and timely, contribution.

Specifically, cross-functional teams, or other forms of multi-disciplinary collaboration, appear worthy of close examination for a variety of reasons.

- First, issues of inter-organisational trust and unconscious social processes are known to be key factors in the promotion of organisational learning. These are issues fundamental to the operation of a team with the requisite diversity of functional specialities, viewpoints and cultures.
- Second, capturing project based learning has been distinguished as a key element of knowledge management. The majority, if not all, cross-functional teams operate on a project or programme basis.
- Third, cross-functional teams typically confront a different set of performance expectations than do conventional work groups/ teams and are often expected to create knowledge and disseminate 'best-practice' as part of their organisational goals.
- Fourth, attachment to a cross-functional project team or taskforce is an increasingly popular practice in formalised management and employee 'development'. A risky move perhaps, when so little is known about what individuals learn, and how this learning takes place.

1.2 Research objectives

Focusing on the experiences and insights of individual members of cross-functional teams the IES research was designed to explore the following key questions:

- What does the organisation hope to achieve through cross-functional teamworking? What expectations does it have about knowledge creation, knowledge transfer and learning?

- What do the individual members of cross-functional teams expect to gain from this way of working? Do they have learning intentions when they join such a team?
- What do individuals actually learn? In what ways is this learning unique to cross-functional teamworking – could it have been gained in other ways? Are there other outcomes associated with their experience and what do individuals do with this new found knowledge/skill *etc.*?
- Is it possible to define the process of team learning? Are there preferred methods?
- Which contextual factors (*eg* organisational context, the team experience, and capability of the individual) enable learning within a cross-functional environment? Which appear to inhibit it?
- What practical guidance can this research offer employing organisations that wish to make the best use of cross-functional teamworking as a route to both individual and organisational learning?

1.3 Research method

A review of the literature revealed little empirical research on cross-functional teams – mainly limited to product development teams. The literature on traditional teams, however, is vast and provides a rich base for conceptualising the internal process of cross-functional teams, particularly in relation to team dynamics. Existing studies of the context in which teams operate, however, have typically examined conventional outcomes such as task performance and member satisfaction. The creation of knowledge and learning out of teamworking has received little attention to date.

IES invited its Research Club Members to participate and nominate one or more cross-functional teams which had been operational for a minimum of six months. A total of ten teams were selected from the six major UK employer organisations taking part.

Following an earlier pilot, fieldwork was conducted between October 1998 and January 1999. Researchers from IES conducted a total of 72 structured interviews with team members, their team leader and, wherever possible, a senior management sponsor or champion. In addition, interviewees were asked to

complete a short confidential questionnaire. Fifty responses were received and analysed.

In January 2000 a forum of senior HR professionals from a further eight companies revisited and updated the research with their own more recent experiences.

1.4 Structure of this report

We begin (in Chapter 2) by exploring the reasons for the popularity of cross-functional teamwork and define the types and forms such teams typically take. We also introduce by way of a brief description of 'form and function', the case study teams from whom we will draw examples throughout the report. In Chapter 3 we present our evidence on exactly what and how individuals and teams learn. In Chapter 4 we attempt to clarify what factors from within and outside the team influence its effectiveness and capacity for learning. We conclude (Chapter 5) with some practical suggestions on how to make the most of cross-functional teamwork for both individual and organisational learning.

This report is aimed chiefly at senior HR professionals, for it is their role in supporting the learning in and from cross-functional teamwork that is relatively underdeveloped and unused in many organisations. Senior line managers, team leaders and project directors may also find the report helpful in understanding what they can do to help teams work better and learn better.

2. The Nature and Purpose of Cross-functional Teams

In recent years there has been a proliferation of interest in the use of cross-functional project teams and taskforces to resolve often complex organisational issues. But what constitutes cross-functional teamwork and why use it? In this chapter we draw on relevant literature and the experience of our case study teams, to discuss the following:

- Is it possible to define cross-functional working, and in what ways does it differ from more conventional teamwork?
- Is there one business rationale for using cross-functional teams, or do they offer multiple benefits?
- To what extent is the type of cross-functional team determined by its *raison d'être*, and does an organisation's chosen team type influence learning intent?

2.1 Defining cross-functional teamwork

Cross-functional teams are typically composed of individuals who have a functional home base (*eg* engineering, personnel, marketing, *etc.*) but who work collaboratively on issues or processes requiring diverse resources.

The exact form that cross-functional teamwork adopts varies enormously according to its purpose and organisational context. We identified four key areas which distinguish cross-functional teamwork from more conventional teams. They are:

- functional diversity
- competing identities
- integration in the organisational structure
- performance expectation.

Functional diversity

We know from the literature (Argote, 1993) that there are several different types of diversity, which fit under an umbrella of 'functional' characteristics. They include differences among individuals in knowledge, skills and abilities; values, beliefs and attitudes; personality, cognitive style and behavioural style. The ways individuals access different networks and different physical resources (*eg* clerical support, funding, technologies) also represents a potentially functional type of variety.

Our own study confirmed, with many examples from team members, that they encountered significant differences between themselves and other members from different functions in terms of, for example, the way they approached a problem, their preferred communication style, *etc.* Stereotypes of 'functional' norms and characteristics are rife in most organisations. Certainly amongst the case study teams many individuals admitted to basing their initial judgement of the likely contribution and approach of fellow team members largely on their previous roles/function *etc.* For them, many of the stereotypes had remained true and reinforced their certainty that different functions have their own sub-cultures. But many preconceptions had not been realised and had caused individuals to reframe their view of the individual and often their function. We will return to this issue of the potential for creative/constructive conflict and diversity in more detail later in the report.

Competing identities

Although it receives scant attention in the literature, we expected that the members of cross-functional teams, as a representative group, would have a competing social identity and obligation/ loyalty to their home function. In a traditional team or line structure there are clear reporting lines to one or possibly two line managers, with direct peer support from colleagues working

to objectives compatible with one another. In a cross-functional team, regardless of the permanency of the team, individual members have to determine a balance between their commitment to the team and that to their function. As we discuss in later chapters, serving both communities can be both a source of tension and of personal growth.

Integration into the organisational structure

Another dimension on which cross-functional teams differ from more conventional teams, and from each other, is the extent to which they are part of the formal organisational structure. Cross-functional working may be a permanent fixture, fully integrated into the structure and process of a work unit. Alternatively, teams can operate on a project basis with a definable beginning and end, *ie* time limited. Both permanent and time limited teams can be 'virtual' teams, *ie* they are superimposed across reporting lines within the company. Others exist in parallel to the rest of the formal organisational structure and are typically a cost or profit centre in their own right.

Performance expectations

Our study also reinforced the view that cross-functional teams often confront a different set of performance expectations from conventional work groups. For example, all of the case teams were in some way expected to create knowledge and disseminate 'best practice'.

2.2 Case study teams: an overview

A total of ten cross-functional teams were selected from the six major UK companies who took part in the research. Each had a minimum of six members representing a different functional, departmental or professional group referred to throughout as their 'home' function. All of the teams had been operational for a minimum of six months.

A short description of each of the Teams' objectives and form is given below. Each has been allocated a letter A to J, to identify them throughout the remainder of the report.

Team A. Food company — distribution hub team

This is a project team charged with the creation of a major new distribution hub for the whole company. The team is truly multi-disciplinary, and the project has to deal not just with the building of a vast new storage and distribution centre, but with a wide range of interfaces: with the factories; the company which will own the 'hub' and from which the company will lease it; with those involved in distribution; with the IT company responsible for the new systems. The project is a flagship for the company and its success is seen as very important. Different members of the team put in varied amounts of time over the lifespan of the project, most being part-time on the project. In addition to the team leader, the team has a co-ordinator to help with planning and progress chasing.

Team B: Food manufacturer — business team

The team is responsible for the business performance of a food business — one of three such business teams in the company. The team is permanent but 'virtual' in that it cuts across factory units and functions, and therefore across the main reporting lines within the company. Only the chairman of this team is full-time in this role, other members also having other job roles. The chairman is accountable for achieving business performance but with virtually no direct resource, so the team achieves results through influencing those within the traditional site and functional structures of the organisation.

Team C: High street bank — internal consulting division

The internal consulting division is almost entirely a project-working environment. The projects vary in size and duration and most combine consultants with other staff from the bank's business areas conducting projects. The particular project team examined was larger than most, with eight people working full-time on the project, and of several months duration. The project was working simultaneously with many areas of the business, and so involved large numbers of the bank's people in addition to the consulting team. The overall project was divided up into discrete sub-projects each looking at a business activity across the bank's businesses, so day-to-day work for consultants was mainly done in ones or twos, with the whole project team only coming together for meetings. The team size was built gradually, so new members of the team were joining as the project went along.

Team D: International transport group — project enterprise

The Enterprise team was established in 1998 with the objective of designing and implementing consistent business support processes, supported by an integrated business system, across the Group. The 60+ strong team is led by a senior director and is accountable to a Programme Board of MDs and directors. The whole team is made up of a series of 'expert teams' staffed with representatives from all support areas of the business, *eg* procurement, HR, Maintenance, Project Management and Finance, *etc.* There are two project managers, one from Company D and one from the initiative partners, a major software house. The software house consultants are members of all the teams and play a critical role in developing process re-engineering skills. The majority of team members are full-time and all but two of the team members we interviewed for this study had been with the project since the start.

Team E: Strategic alliance in the construction industry

The construction of a major transport link launched in June 1998 was a major (£440M) construction project managed as a partnership by four major companies. Initially, the companies had worked 'seamlessly' with their respective engineering and commercial teams working closely but separately. However, following a spectacular tunnel collapse which threatened to delay the project by several years, both engineering and commercial teams were integrated into a single team. A small team of 'champions' (20) from each of the major contractors and suppliers were responsible for promoting and implementing the seamless team concept and no blame culture at the 'front line'. A key part of their role was to speed up the resolution of issues raised by the workforce regarding facilities and conditions. Each of the team members was part-time and retained their respective job roles throughout. The champions were managed by the Company E's Construction Director.

Team F: Government agency — specialist team within a regional office

An investigative team working on compliance issues. The team was unique within the Agency in that it was enabled to establish its own portfolio of complex 'gap' cases, *ie* those that fall between the jurisdiction of the central office, which handles very large corporate cases, and relatively small District level cases. The team is accountable to the Divisional Director who conceived the idea of the team in its current structure. There are six full-time members of the team who are co-located within the same office. Each has their own areas of speciality but an important feature of the team is the fact that they work on a whole entity basis. In other words, all members

of the team share responsibility for the referral of an individual case and work on it collectively. The team has been very successful and is attracting interest from the rest of the organisation.

Team G: Government agency — district office

A district team of approximately 50 FTE staff who rotate on a three to six month basis through a variety of roles in four main specialist service functions. Each of the four functional 'teams' has its own co-ordinator who is responsible for highlighting resourcing issues in their area in order that staff can be moved accordingly. They all report to a central District co-ordinator. All staff are cross-trained to perform all relevant roles and are appointed a 'buddy' with experience in the area. An element of multi-skilling has been in operation since 1995, but it wasn't until a major delayering exercise in 1997, and the aftermath of the introduction of a major new public service initiative, that a one-stop shop approach was formally recognised.

Team H: Financial services — 'Test Zone'

A major re-engineering initiative focused on the home moving process, involving representatives from Distribution, Estate Agency, Marketing, IS and Finance had been brought together to work in this way. The team was accountable to the Executive Committee for the design and testing of a number of revised processes and systems. The team's work was 'ring fenced' from impact on business results in order to encourage innovation and a degree of risk-taking. The size of the team fluctuated over time. Originally there were eight full-time senior members, however numbers rose to over 40 at some stages. The eight-team members we interviewed had each been full-time members for one year or more. The team was in the process of closing down during our investigation.

Team I: Aerospace — service and support group

At the time of our investigation, the team had existed in a consistent format for just over a year and it is now a permanent, co-located group. There are some 45 members, most of whom are virtually full-time to the team but all of whom report in a matrix structure to both the team leader and their home function. The team's brief is to improve customer satisfaction and strengthen relationships, where possible developing new business opportunities for additional services. The team leader is fully accountable for the financial performance and customer satisfaction in respect of the ten mature engines it services and provides spares for, *etc.* However, the individual function heads (*eg* engineering, customer logistics and support) determine resources including personnel. Given the scarcity and high level of skills required, securing the right people for the right

project at the right time is critically important and the source of some current debate.

Team J: Aerospace — integrated product team

After a two-year theoretical pilot, the team has existed in its current form for a year and is responsible for the design, production and customer support of two engines — one of which is new and still in pre-production phase. It represents the partial integration of personnel from Experimental, Production, and Customer Logistics and Support into a generic methods team. It is one of many Integrated Product Teams (IPTs) implemented through the ambitious change programme 'Better Performance Faster' with the objective of eliminating duplication, *eg* in drawing costs, improving customer responsiveness and reducing lead times. The 50-strong team report to both the Team Leader and to their own line manager in their home function. Once allocated by their function to the project team, most team members are full time in that role. All can be called off at short notice for professional development relevant to their function. Whilst a few are co-located, many team members are dispersed around a large site and retain the terms and conditions of their function.

Having defined cross-functional teamwork, we were interested to explore to what extent the distinguishing features of any one particular cross-functional team are determined by the business rationale for their formation, *ie* the team's *raison d'être*. Only then should it be possible to understand an organisation's expectation of learning and knowledge creation from cross-functional teamwork. Why then do organisations adopt cross-functional teamwork?

2.3 Why use cross-functional teams?

The literature and research evidence on the relationships between teams and absolute performance is by no means conclusive or consistent (Higgs, 1998). But the prevailing view on teamwork is that it is a major contributor to improved performance in terms of productivity, the quality of decision making, and its positive impact on the attitudes and perceptions of team members.

The popular management literature (Northcraft, 1995) presents the argument for more cross-functional collaboration as a simple one. Many organisational problems are complex and cut across boundaries and functional chimneys. The ability of any

individual specialist to appreciate all the relevant aspects of a 'boundary spanning' problem is limited. Consequently, organisations have come to appreciate close interaction between diverse functional areas.

Is the rationale for cross-functional teamwork this straightforward in reality? Not every task requires great groups of people co-ordinated in a complicated way to achieve it. Many are still achieved by means of a more traditional line function. How, then do employers decide when it is particularly appropriate?

We asked senior managers and team members in the case study organisations to reflect on the thinking behind the adoption of their cross-functional teams.

Creating synergies

Without exception, all of the organisations in our study had adopted cross-functional teams in order to gain some form of **synergy**, *ie* the ability of collaborators to do better, or accomplish more, working together than they could do alone. Several key themes emerged from their reflections on what kind of synergy they sought and why. These included:

De-centralisation. Trends in recent years towards the establishment of autonomous business units and devolution of authority to line managers, have challenged the notion that synergy is something universally to be aimed for (Walton, 1999). Synergy, by definition, is concerned with co-ordination, establishing linkages and 'fit'. Business unit autonomy and exhortations to exercise local discretion in decision making have led to an emphasis on 'split'. For some of the participating organisations, a diverse team of individuals drawn from both the central and local functions offered an opportunity to improve communication and reduce the divide.

Differentiation of functions. There is a well-established body of research on the way in which functions develop their own sub-cultures. Lawrence and Lorsch (1969) defined these sub-cultures as differences in cognitive and emotional orientation in respect of their goal orientation, their focus on short-term horizons rather than long-term perspectives, and the

predominant interpersonal style. Most of the case studies gave illustrations of how different functional areas tend to get absorbed into handling and resolving the specific issues facing them, often without reference to other parts of the organisation. Boundaries are established between departments, reinforced by separate physical locations and reporting relationships. Over time, boundaries can become barriers, as individual groups tend to see others as being the source of their problems. Cross-functional teamwork offered them some form of structure and a chance to develop collaboration and co-operation.

Value of constructive conflict. Pascale (1990) introduced the concept of contention and the presence and value of constructive conflict. Even contradictory opposites can be an engine of self-renewal and a better strategy for adaptation or survival than order and equilibrium. Amongst our case studies, most had shared an expectation that functional disciplines would advocate different points of view and rub up against one another and generate debate. On the whole they viewed tension of this kind as inescapable and potentially productive if well managed.

On-going process improvement. The development of synergies is not a once-and-for-all process, but can be an ongoing act of seeking out and learning about linkages and resultant benefits between activities which have been previously unconnected, or where the connections have been of a different type (Johnson and Scholes, 1993). Certainly, among the organisations in our study there was a general sense of continuous change, and that cross-functional teams were part of the search for new and better ways of doing things.

2.4 Desired outcomes and team types

Further insights into the rationale and value of cross-functional teamwork comes from considering the nature or type of team alongside its desired objectives or outcomes. The teams in our study appear to represent four main team types. They are:

- innovation and new product/service development
- problem-solving across traditional organisational/functional boundaries

- integration of systems typically via process re-design/re-engineering
- co-ordination into a 'one-stop-shop' or a single point of contact or delivery.

Innovation

These teams are brought together in order to create the type of environment in which creative conflict might flourish. Typically they have an explicit brief to look at something afresh and come up with new and innovative ideas, *ie* to build special capabilities that a market or a particular technology demands that are outside of the organisation's mainstream. They sustain their autonomy and diversity as a decentralised cost or profit centre, or a stand-alone subsidiary. They are a permanent or semi-permanent feature of the overall organisational structure.

Of the teams in our study H, I and J came closest to this model. None of them knew at the point of the team's formation exactly what they were to achieve, other than to be innovative in relation to the conceptualisation, design and testing of new product enhancements and service developments.

Problem-solving

Perhaps the most common reason for a cross-functional team to be appointed is for them to address a specific issue or known problem. Typically, the team's intervention will be managed as a time-limited project. The size and scope of the project will obviously determine the exact nature of the team. Very often membership is a part-time responsibility and members retain their line roles. Within Teams A and E, for example, most team members were part-time, contributing as and when their expertise was required. An exception was team C where team members were almost professional problem-solvers in the sense that they moved from one cross-functional project to the next in a consultancy role.

Systems integration

Information technology and the development of major business systems is an arena in which cross-functional working is the

norm. Countless organisations have undergone business re-engineering or process re-design initiatives in order to determine the potential benefits and change implications of new systems and processes. Given the certainty that certain major business processes cut across functional 'chimneys', it makes absolute sense for representatives of each of the affected functions to work together to re-design processes and oversee their build and implementation. The core members are usually full-time and co-located. Such projects go through distinctive stages at which point the nature and role of membership changes; Team D is a good example. Often such 'systems integration' type teams have their origins in 'innovation' or 'problem-solving teams' (*eg* Team H). They often work in partnership with team members from a consultancy/software house.

Co-ordination: one-stop shop

Effectively, an end point of some cross-functional collaboration is that it becomes a permanent fixture. One option is for a new functional division to be created that fully integrates previous functionally separate groups together as a single unit. The co-ordination of customer service via a one-stop shop, for example. In some cases, team members are cross-trained so that they are all capable of doing aspects of each other's job, as in Team G of the IES study. Alternatively, organisations adopt permanent but 'virtual' teams who sit across functional reporting lines and are accountable for business performance via their influence.

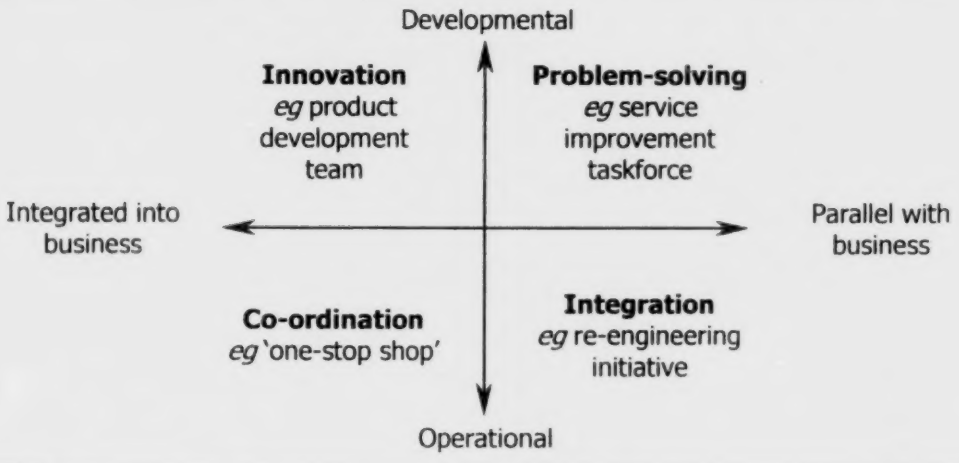
2.5 Towards a model of cross-functional team types

Amongst the case studies there is a distinction between:

- those teams who are primarily concerned with cross-functional collaboration that in some way shapes the future of the organisation strategy and *development* of the business: refocusing the business after a major change; new product development; implementation of mergers, acquisitions and other corporate alliances. All require the building of a critical mass of people who can **generate new knowledge or synergistic learning** and commit around an emerging consensus

and

Figure 2.1: Team types



Source: IES

- cross-functional teams who are responsible for largely *operational* business processes, such as the implementation and/or delivery of new integration or co-ordination methods. The emphasis is upon the **application and delivery of shared knowledge.**

Another dimension on which the teams in the IES study differ is:

- the extent to which they are **integrated** into the organisation structure and business processes as a semi-permanent structure

or

- organised as a **parallel** and largely separate project.

These two dimensions (type of synergy and integration with the organisations' structure) provide a model by which the business rationale for cross-functional working can be mapped.

This chapter then has constructed a framework against which to compare the different reasons why organisations adopt cross-functional teamworking and what those teams typically look like. In the following chapter we look at what those teams and their individual members learn and how.

3. Learning Methods and Outcomes

In this chapter we explore, through the experiences of the case studies and survey respondents, the following themes:

- individual team members' expectations on joining a cross-functional team, and their intent to learn
- the learning process and relative importance of particular methods/activities *etc.*
- what is meant by 'team learning' as opposed to the learning of the individual in the team
- the nature of the learning outcomes, both as knowledge and skills acquired and other attitudinal changes.

3.1 Difficulties in measuring learning outcomes

We understood from the literature about the difficulties in determining learning outcomes. There are, for example, significant issues around what constitutes learning and how easily it can be differentiated from experience. Some types of learning while working were viewed as 'just part of the job' highlight how particular types of learning are not defined as learning by the participants, because the primary purpose of the activity was not learning.

Surprisingly, the IES interview was the first occasion on which the majority of team members had been asked directly about what they had learnt, or were learning, from their experience. We followed up the interview with a short questionnaire, thereby allowing for an opportunity to reflect.

3.2 Employee expectations and intent to learn

We were keen to understand the motivations of individual employees for joining a cross-functional team. The individual members of participating teams were asked what they expected to get out of their time working in this way, prior to joining.

Hopes ...

There were some common themes with hopes that their membership would bring opportunities to:

'do something new' and more stimulating

'freedom from a bureaucratic, stifling environment'

'get noticed' given the high profile of the team's work

'make my mark' and influence the future direction, shape etc of the organisation

'accelerate my career' by being in the right place to quickly acquire the skills needed to get on.

... and fears

There were concerns too. For some, membership represented a 'high risk, high reward' move. The risks being that they would:

'be associated with a non-starter if the project fails'

'find it difficult to get back'

'never find time for two jobs'

'lose touch and fail to keep myself up-to-date'

'not know who my manager is'.

Volunteer or conscript?

We anticipated that the expectations a team member has on joining might be influenced by the extent to which the move was one of their choice or not. Indeed, the young and ambitious

analyst who had applied for a post with the internal consultancy teams in Team C had a specific kind of learning experience he wanted to gain in order to better facilitate a move to Head Office. Whereas, a claims processor in Team G viewed the reorganisation into cross-functional teams with scepticism and uncertainty. However, there are no hard and fast conclusions to be drawn as to whether a volunteer expects to learn more than a conscript. Not surprisingly, it is very much dependent upon individual circumstances.

It is interesting that a successful, high profile cross-functional team does quickly attract the interest of those wishing to further their career in some way. A member of Team D told us that, despite initial problems in attracting good people to the team:

> *'it was as if once we had a success or two that word just went around that this was the place to be. Many of us were approached regularly by colleagues in other parts of the organisation wanting to know what we were up to and how they could join.'*

Interestingly, only one of the teams in our study (Team C) is explicit, when selecting team members, that to be successful they must demonstrate a commitment and willingness to learn.

Absence of a learning goal

Few individuals had clear expectations about what they could learn from cross-functional working.

Those who had more specific learning intentions tended to be more junior staff for whom membership of the team was going to offer opportunities to undertake tasks traditionally of a higher grade, thereby enabling them to develop the competencies required for a promotion, or access to a training scheme, for example.

Given the popularity of cross-functional teamwork in many Management Development programmes, it is perhaps surprising that none of those interviewed believed that their membership was influenced by a Personal Development Plan or other such review of their development needs. When individuals had sought advice on whether or not to join the team, it was almost always from their line manager and/or their peers. From their

experience, it would seem that few cross-functional team members or their line managers are aware of any support that might be available within the HR function regarding the choice of cross-functional working as a route to their learning and development.

One of the case study teams used the offer of access to additional training and development as a means to attract potential team members. An internal newsletter included information on the Team's objective plus:

> *'Improve your CV. As a member of Team E you will gain valuable experience in problem-solving, facilitation skills and learning to think "outside your box". A number of workshops – influencing skills, assertiveness, creative problem-solving – are available to team members. The newly acquired skills will help you become a more effective operator in any job, on a project, in any role.'*

Several of those who subsequently joined the team felt that the promise of this personal development had directly influenced their own motivation to join and to learn.

3.3 Learning methods

The previous sections have focused on individual's expectations about learning. In this section called *Learning methods* we move to the actual process of learning. We asked team members to tell us in what ways, *ie* by what method, they had learnt. Following a short pilot, a prompt with four distinct learning methods was used both in the interviews and subsequently on the questionnaire. The prompts together with an example response are given below:

1. **Direct transfer of knowledge or skills from other experts.** These might be representatives on the team with a particular expertise to impart via team meetings, briefing sessions, *etc.* Alternatively, it may be via a formal training or development activity targeted at the team but delivered externally.

   'Like most people in construction, I've had a lifetime of working under adversarial conditions and I was extremely cynical about the whole single-team philosophy. The workshops really helped cut down the animosity between us all. They taught us how it's all about learning to see the other person's point of view.' Senior Manager, Team E

2. **Picking things up from observing diverse others in action.** Typically, this is learning which is transferred informally and potentially subconsciously as a result of close interaction with alternative styles and views.

   'I found it fascinating how those guys would sell people an idea and get them all fired up to ask more. I think I'm a lot better at influencing people now as a result of watching how they did that.' Manager, Team F

3. **Collective problem-solving and experimentation.** Learning may occur as a result of group action to seek or give new information and test out ideas, usually in a team meeting.

   'Working alongside the consultants was such an eye-opener. They approached each issue in a very disciplined way and we'd all have to share what we knew and what we thought. The meetings were often very intense but things never got personal.' Manager, Team D

4. **Consolidating prior experience and re-framing new insights.** Learning in this way might involve an individual, for example, reflecting on hidden assumptions and inquiring into the reasoning behind their own actions.

   'It's amazing how walking colleagues through the planned designs can have lead to the changes now made. It was only when we tried to explain why we'd designed it that way that we saw the potential for something quite different. I saw some of our sacred cows for what they are.' Senior Engineer, Team J

Learning awareness

Many people, not surprisingly given that this was the first time they'd been asked to reflect upon their learning, were not necessarily conscious of how aspects of their learning had come about. Their immediate response was often to recall whether or not they had any formal training in their team role.

Relative importance

Team members were asked to consider how accurately (or not) the prompts described the ways in which they had learnt and to provide an example. In the follow-up questionnaire they were asked to rank them in order of importance (see Table 3.1).

Table 3.1: Learning method ranked in order of importance

Learning method	% ranking learning method as most important
Direct transfer from other experts	43
Picking things up from observing diverse others in action	21
Collective problem-solving and experimentation	18
Consolidating prior experience and re-framing new insights	18

Source: IES

Clearly, the majority of our survey respondents perceive that they have learnt most from the direct transfer of new skills and knowledge from other experts. We know that provision of formal training for teams was very limited in all the teams. The learning occurs mainly as a result of working closely with each other. The implication is, therefore, that the appropriate mix of expertise on a cross-functional team, and the skills of individual members in sharing and otherwise imparting their knowledge, is critical.

3.4 Defining team learning

Teams, not individuals, have become the key learning unit in many organisations. Almost all important decisions are now made in teams, either directly or through the need for teams to translate individual decisions into action. Without reliable methods for building and supporting teams that can learn together, it will only happen by chance and be unrepeatable. Can the IES study shed any light on the somewhat mysterious concept of team learning, *ie* what happens when teams learn, as opposed to individuals in teams learning?

Although the literature stresses the importance of team learning, it offers very little in the way of definition or description of what it is. The most influential definitions are synergistic, *ie* they emphasise the creative potential. Senge (1990), for example, defines team learning as 'reflecting on action as a team and transforming collective thinking skill so that the team can develop intelligence and ability greater than the sum of individual members' talents'.

The limited literature on team learning also suggests that teams typically progress through a series of developmental stages (Kasl *et al.*, 1997). In the first stage, learning is **fragmented** as individuals learn separately and retain their own views. In the second or **pooled** stage, individuals begin to share information and perspectives in the interest of group effectiveness. The team is valued as a context for individual learning but the group as an entire unit does not learn. In the third and truly **synergistic** stage, members create knowledge mutually. Divergent perspectives are integrated and shared-meaning schemes created.

The IES study, therefore, cannot confirm or deny the reality of such stages. Our study provides only a snapshot of the learning experience of a team and its members at a particular point in the team's development. Additional research is clearly needed to establish how the learning capability of cross-functional teams develops over time.

3.5 Ground rules for team learning

We were, however, able to explore with some of the teams exactly what it was about the way in which they worked together that led to a sense that they were learning collectively. Three practices identified by Senge (1997) were particularly relevant. They are:

- facilitating a balance between discussion and dialogue
- dealing with conflict
- learning to learn over time and with practice.

Facilitating a balance between discussion and dialogue

A really effective team leader or facilitator will enable a team to move between dialogue and discussion. In open dialogue, a group explores complex difficult issues from many points of view. Individuals suspend their assumptions but they communicate freely. The result is a free exploration that brings to the surface the full depth of people's experience and thought, and yet can move beyond their individual views. When a team must reach agreement and a decision be taken, some discussion is needed, *ie* different views are presented and defended.

Only the handful of interviewees who had received any form of relevant coaching or training, *eg* in collaborative problem-solving techniques, were conscious of any balance being managed. But many more recognised the change of tone to those team meetings when a greater sense of open dialogue was enjoyed.

Dealing with conflict

One of the most reliable indicators that a team is continually learning is the visible conflict of ideas. The free flow of conflicting ideas is critical for creative thinking, for discovering new solutions that no individual would have come to on their own.

However, there were several teams within the IES study that were clearly not managing potentially creative conflict well. Obviously it is hard to make a judgement, given that perceptions vary significantly. Within the same team we were told by one member that 'There isn't anything we can't discuss', and by another that 'There are some pretty irreconcilable differences between the functions represented here. If we are to achieve anything as a team we can't afford to rock the boat by bringing them up.'

Argyris's (1990) research into why capable managers often fail to learn effectively in management teams, highlights the concept of defensive routines, *ie* entrenched habits we use to protect ourselves from the embarrassment and threat that come with exposing our thinking. Defensiveness and political game-playing is unfortunately a major part of most organisations' culture. It is particularly compounded in environments where to have incomplete or faulty understanding is a sign of weakness.

Effective team leaders have learnt to confront defensiveness without producing more conflict. They typically use a lot of self-disclosure regarding their own feelings, and challenge team members to acknowledge when they might feel defensive, and question why. Anyone using their role or position in the hierarchy to intimidate others is not tolerated by the team. The Team Leader of Team E told us that:

> *'People's honesty about the business reality out there is not enough. I need people who are brave enough to confront what goes on within the team too.'*

Learning to learn by practice

Team learning is a team skill and requires time and practice. The pressure of time constraints and changes in team membership were immediately highlighted as problems. Taking time out together for an awayday type session was valued by at least two teams. There were, however, only isolated examples of experimentation and reflection on decision making by the team.

3.6 Knowledge and skills acquired

We have talked about how learning takes place within the team but what about the content. What do people learn?

Many of those interviewed claimed to have been surprised either by the content or volume of their learning. Our analysis revealed some clear patterns in the types of knowledge and skills they acquired, as well as other outcomes associated with their application of that learning. These are explored in turn below.

Learning categories

There are at least three definable categories or types of learning distinguishable from one another in terms of the knowledge and skills acquired. They are:

- **learning about self**, *ie* enhanced personal effectiveness via generic inter-personal, interactive and communication competencies, such as influencing others, handling conflict, listening and feedback. In addition, people spoke of their team membership enabling them to quite fundamentally re-think

Table 3.2: Skill/knowledge types ranked

Skill/knowledge acquired	% ranking skill type as most important
Personal effectiveness and learning about self	40
Learning about organisational interdependencies	38
Learning about other specialisms	22

Source: IES

themselves and their own motivations, work preferences, learning styles *etc.* For example:

'I've learnt how important it is to be open with one another and to let people get to know you and how you function. I used to be so tight-lipped and stick with facts. It's no wonder people didn't seem to trust me.' Senior Engineer, Team I

- **learning about the organisation**, *ie* a better understanding of the interdependencies of different parts of the organisation and related processes (systems thinking); appreciation of the complexity of managing change and its implications for problem-solving and decision making; skills in identifying improvement opportunities and building shared vision; collaborative enquiry – clarifying (internal and external) customer requirements, *etc.* For example:

  'I had no idea how entrenched some people are in their way of thinking. It's very easy to see that on paper we could be doing this a lot quicker and a lot more effectively. The logic of that is not enough though – people get so defensive that to change anything is a slur on how they did it in the past. You can't make people buy in to what we've been doing, but you can help them see what they could achieve. It all takes so long.' Manager, Team D

- **learning about other specialisms**, *ie* the acquisition or appreciation of particular functional or job competencies, and tools and techniques, typically used by other specialisms/ functions. Individuals spoke of becoming familiar with the requirements of others working methods, professional standards, regulatory requirements *etc.* For example:

  'This has been like an accelerated apprenticeship for me. Because I've been part of the investigative team and not shut away in a back-office somewhere, I know what it really takes to bring a case to a close now – the interview techniques to use, how to time your visits, etc.' Member, Team F

Enhanced personal effectiveness

The team members interviewed, consistently reported that it was the 'softer' skills around their self-awareness and personal effectiveness that they had developed most. This was borne out by their responses to the survey, with 40 per cent ranking learning about self higher than the other learning outcomes.

This is a somewhat surprising outcome, perhaps, for those employers who increasingly engineer their high potential staff's

cross-functional experience in order to 'fast-track' their understanding of, for example, how Finance works or Marketing operates.

3.7 Other outcomes

There were other outcomes for the team members in our study of their cross-functional team experience. This learning is to do less with the acquisition of new skills, and more to do with a new understanding of themselves, their role, and the performance requirements and expectations placed on it. They can be summarised as:

- a kind of **career confidence**. If any learning is to have an impact on performance, clearly you need to know what to do with what you know. The team environment certainly appears to provide individual members with the confidence to apply new learning.
- **career challenge**, in the sense of cross-functional teamworking having presented a new kind of satisfaction from their role. For example, several team members spoke of the sense of satisfaction they gained from directly coaching others less experienced or familiar with their own area of expertise. Particularly for those who had believed themselves to be nearing the end of their career, this had been a source of renewed energy and enthusiasm. The cross-functional experience had also been helpful in developing the skills needed to coach others.
- cross-functional experience alerting people to alternative **career options**. For some, this took the form of a realisation of their new-found marketability, given internal consultancy skills and process re-design/re-engineering experience. In one re-engineering team, 19 of the 20 or so permanent members left the organisation on completion of the two-year project. For others, particularly younger team members, cross-functional experience relatively early in their career had significantly broadened their personal network and access to job opportunities within the organisation.

To what extent, however, are learning outcomes influenced by the conditions set by the wider organisational context and the team's own operating principles? In the next section we turn our attention to the influence of context and process.

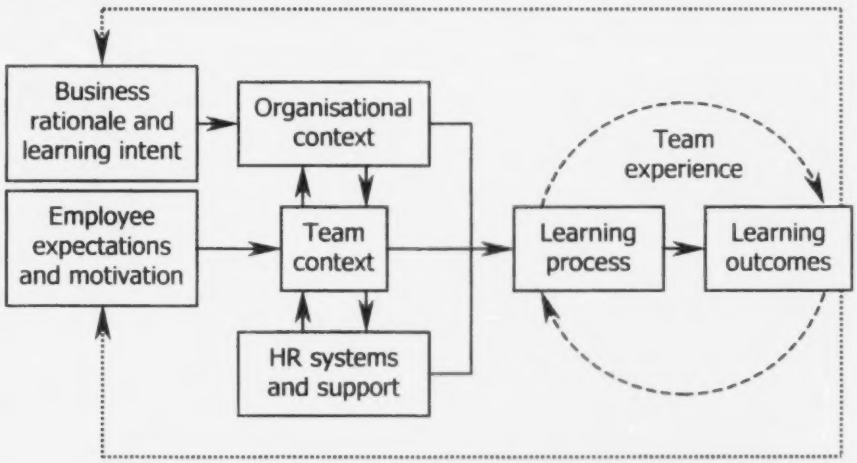
4. Influence of Context on Learning

The context for cross-functional teams is complex and differs from that of conventional teams in that it includes hierarchical, lateral and inter-team dependencies that require continuous negotiation. This chapter attempts to illustrate this complexity, and the means through which teams manage and learn within it.

4.1 Modelling the relationships

In Chapter 2 we looked at the variety of reasons for adopting cross-functional teams, and questioned the importance of the business rationale and learning intent of the wider organisation. Here we discuss the impact of the organisational culture and systems in which teams must exist (**organisational context**); the

Figure 4.1: Influence of context and process



Source: IES

operating principles and dynamic of the team (**team context**), and their impact on the **team experience**, *ie* the learning process and learning outcomes (as outlined in Chapter 3).

4.2 Organisational context

The issues identified by the teams (in the IES research) as being particularly important to their effectiveness included:

- the clarity with which the role and purpose of the team is defined and communicated
- the complexity of reporting relationships and the extent to which team members have the support of their 'home' functions
- management of the team's relationships with the rest of the organisation, including other teams
- the autonomy the team has to organise its own work within its resources.

Support of home functions

As Figure 4.2 (p. 33) shows, less than half (24) of respondents to the survey agreed that they had the support of their home function. This 'support' or the lack of it can take a variety of different forms:

- Responsibility for performance appraisal, conditions of service *etc.* is often retained by a team member's home function. Not all individuals were confident that their functional line manager made sufficient effort to fully understand and take account of their contribution to the team in their performance assessment. In fact only just over half (26) of survey respondents agreed that they received appropriate recognition for their contribution to the team. Notably, in one team (Team I) the insistence of two 'home' departments that team members retain their specific working hours and practices presented some considerable tensions. The right to a nine day fortnight and a longer lunch break for half of the team and not the other was clearly divisive.
- The 'home' function remains the main source of specialist expertise through which a team member can keep themselves up-to-date and access support and guidance. This was especially true in those teams where individual members were concerned to continue their continued professional development (CPD). Maintaining contact was also very

important for team members who were the sole representative of their functional/specialist area on a team. In some teams the relationship was managed relatively informally, largely by the individual via requests for advice/information. Elsewhere (*eg* Teams F, I and J) functional line management requested team members' attendance at departmental meetings or training sessions. Team leaders were largely keen to encourage continued contact. However, the annoyance of the project manager who, 'regularly loses up to 50 per cent of my team at short notice for unplanned talk-shops', was understandable.

- The 'home' function is also a key player in determining the career future of individuals. The support of one's line manager can be invaluable in brokering new job opportunities, gaining access to development or just reporting on future potential. Most team members felt understandably uncomfortable with a team role that led them into any form of confrontation or challenge with senior managers in their 'home' function on whom they felt their future depended.
- Functional departments often have a key role to play in communicating the rationale for, and progress of, cross-functional initiatives down through the organisation. The teams in our study have largely been disappointed with home functions' lack of understanding of their team's goals. Most have actively developed their own communication strategy, both formal and informal, to keep others informed and 'sold' on the team's project.

In Team D, for example, shared ownership of the project's outcomes with departmental heads across the organisation was essential, given the implications for re-structuring the business. The project team initially depended upon the individual departments carrying out their own briefings. It became clear these were not happening, as operational staff approached by the team for information were unwilling to release it. Team members themselves felt increasingly isolated, and became concerned about their re-entry to the mainstream organisation.

Things came to a head with the departure of a senior core team member who returned to his home function of Finance where he felt better able to influence the successful implementation of the project's objectives. A firmly worded communication from the CEO to all senior managers to 'get on board the train because its already left the station' improved the team's access to people and information. The team also appointed a communications specialist to ensure regular briefings and updates were available to senior departmental staff.

Relations with the rest of the organisation

We know from the literature about the importance of boundary management or permeability, *ie* the process by which a team manages its 'borders' and the flow of information and resources to and from its key stakeholders. High performing teams are known to initiate more communication and external activity than low-performing teams (Ancona and Caldwell, 1992; Conway and Forrester, 1999). Not surprisingly then, the participating teams in the IES study had clearly expended an enormous amount of energy on 'building bridges' with the rest of the organisation. More than half (31) of survey respondents agreed or strongly agreed that their team had effective relationships with the rest of the organisation.

Interestingly, many team members told us they came to resent the amount of time they had to spend on presentations to, and liaison with, the rest of the organisation. Individual members committed to a team's goals can, it seems, quickly become impatient with the larger organisation and can start to feel misunderstood and unappreciated. The longer the team had been together the more likely they were to have recognised the dangers in the development of an 'us (the team) against the world' mentality. Two of the teams relayed to us the benefits of having had explicit advice and support from a senior project champion who had reminded them of the complexity but importance of the project. Only one team had made use of a particular development programme on change management. The most useful element of this was the insight gained into how to influence those outside the team who would prefer to maintain the status quo. Other examples of attempted improvements to boundary relationships included Team F who, in an attempt to dispel rumours about their elitism, issued an open invitation to the rest of the organisation to come and meet the team and see how they worked.

Access to data, information and other resources necessary to any improvement review or re-design initiative can be provided by departmental/functional managers, as required and with minimum fuss. Alternatively, a cross-functional team may feel it has to continually fight hard to make its requirements heard and receive necessary and timely support. One of the most challenging aspects of the team members' experience was that of

having to 're-invent themselves' in order to influence senior functional management to whom they had previously reported. The most effective teams were sensitive to one another's functional loyalties and 'histories' and allocated responsibilities accordingly.

Autonomy

The literature on teams suggests that without sufficient control over the organisation of its work, a team will struggle to create the conditions necessary for 'synergistic' or shared learning. Desired outcomes such as knowledge creation, capability development, *etc.* all require the team to experiment with new ways of doing things and learn from their mistakes.

Of the IES survey respondents, over one-quarter (16) disagreed or strongly disagreed that their team has the autonomy it requires to organise its own work within resources. Amongst the case studies one team leader lamented that:

> *'Whilst I am accountable for improvements in the satisfaction of our major customers, I feel I'm being asked to do so with one hand tied behind my back. I'd expected to be in a position of more control, managing an integrated team that could resolve once and for all the issues no one area was previously willing to tackle. But I'm continually fighting a rearguard action with Engineering, Logistics and others to retain team members. Last time a key player was pulled back they offered me five part-timers in his place. I can't build up the critical mass of skills I need, and our customers are complaining they never see the same people twice. On paper, I have the resources I asked for, but even entering new customer specifications requires three different people to enter it into three different databases. We've developed the generic methods that were needed but we can't put it to good use because the Departments are not willing to accommodate their working practices.'* Team Leader, Team I

Two teams in particular had a high degree of autonomy at the outset, being co-located and resource rich. As time went on they have had to learn to deal with resource constraints and externally-imposed targets. Several team members reported that it was whilst under pressure of time and deadlines demanded from outside, that they were most unwilling to challenge the thinking of their colleagues or try new ways of doing things for

fear of 'rocking the boat': *ie* they adopted risk-adverse behaviour. Team F have, over time and with each change of leadership, radically changed the way in which they work together. They felt that the freedom they enjoyed in re-inventing accepted practices and professional divides directly contributed to their success.

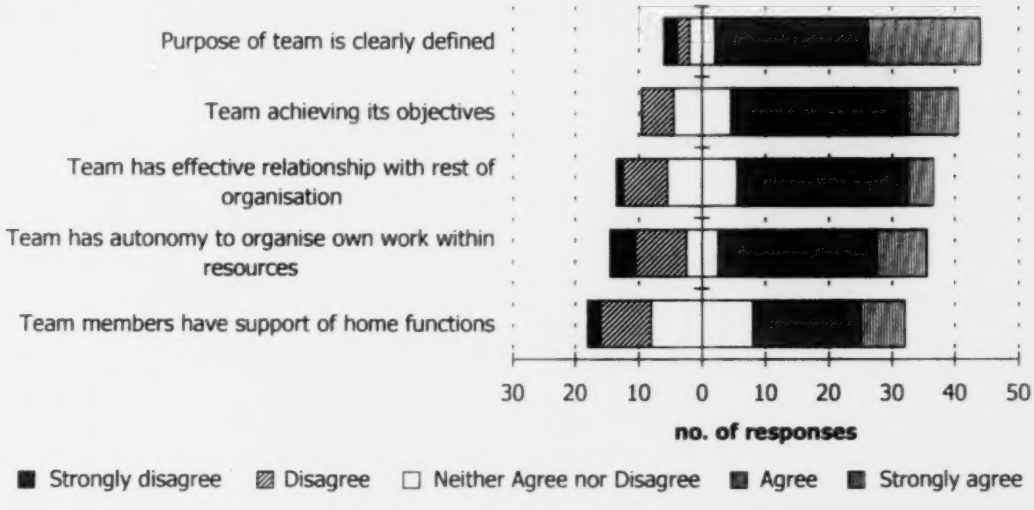
Teams D and H were critical about the way the organisation was judging the team via the traditional performance targets used elsewhere. They felt that the team could quickly lose credibility, as they would seldom compare well. Both were later 'ring-fenced' and this had helped to encourage risk taking and experimentation.

The continuity and perceived strength and influence of the team leadership are a critical determinant of autonomy. Similarly, the team's sense of autonomy is also influenced by the level, and clarity, of authority individual members have, as representatives of their function, to make decisions *etc.*

4.3 Team context

We anticipated that the effectiveness with which the team itself manages tasks and interpersonal relationships will also help determine the nature and extent of learning gained. A recent research study by Higgs (1998), for example, concluded that in

Figure 4.2: Context and purpose of the team



Source: IES

practice, effective team performance is a result of the effective combination of the 'mix' of team members and the processes employed within the team. Key elements explored in the IES study were:

- the degree of contact between team members over time
- composition of the team in terms of its diversity and appreciation of teamwork
- allocation of tasks and integration of contributions
- operating principles, values and leadership style
- the use made by the team of any available IT-based knowledge management systems.

Co-location and consistency

Cross-functional teams benefit enormously from being co-located. Time and time again, individual team members referred to instances of informal exchange of know-how and problem-solving which occurred largely because people were in daily contact with one another.

> *'A year ago I'd still have thought of Customer Logistics as that bunch of useless ****** over the road. Now that we discuss issues as they come up, perched on one another's desks, we've made a step-change in the support we offer. I know it means that we (the Spares Department) are a walk away from the tool shop, but we get involved far earlier in the process and can plan-in when parts are likely to be required in advance of them being needed.'*
> Engineering Supervisor, Team J

This daily, informal interaction allows for the possibility of serendipity and for new ideas *etc.* to come about in quite unplanned and unexpected ways.

Equally important to the teams in this study was consistency of membership. All but one of the teams brought in staff for specific tasks at different stages throughout the project. However, the teams which had a succession of different team leaders and core members found themselves continually having to expend additional time and energy integrating new contributors. Establishing a new team dynamic and trusting relationships takes time. Whilst a change of personnel might have the appeal

of injecting fresh perspectives, it can significantly slow the learning curve of a team.

Team composition

We wondered at the outset whether the positive conflict between different knowledge and skills, values, attitudes and styles that makes a cross-functional team so valuable, can also be a reason why team members can find it so hard to work effectively together. A concept found throughout the literature on cross-functional working is that of social categorisation and identification. These social identification processes (*eg* stereotyping) may lead team members to expect conflicts with other team members when there are no conflicts, and to believe that they can only achieve their goals at the expense of others.

The teams in the IES study recognised this dynamic and varied considerably in their perceived ability to overcome such tensions. The most positive were those who had made an effort to select 'team players' (*eg* those who value team collaboration and indirect achievement), as opposed to selecting individuals solely on the basis of their area of job expertise and availability. Only two teams had made a formal assessment of applicants to an advertised role. The Project Director of Team E told us he:

> *'...regretted not having had the courage of our convictions when we identified people, some of them very senior, who we knew would have difficulties working within a single team environment. We had a process set up to measure people's competencies at working together, and then we bottled out.'*

Team leaders found it difficult and time consuming to access reliable information on a potential member's team preference and competence in, for example, collective problem-solving. Previous teamworking experience was frequently used as a proxy for specific collaborative 'skills'.

Most teams relied on the often-considerable networking skills and influence of the team's senior sponsor or champion to identify likely individuals. Many of the senior managers we spoke to were certainly conscious of a need to create a deliberate mix. One senior Director cited his experience of needing to avoid 'group think phenomenon' (Janis, 1982), *ie* having a team so

focused on its relationships with one another that group decisions go unquestioned.

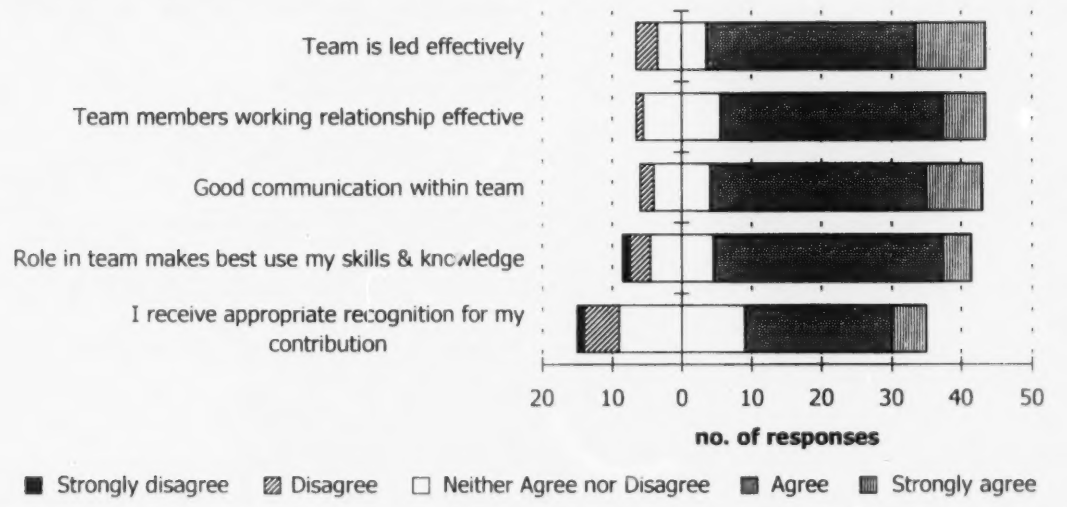
Teams were far less likely to have formally recognised the importance of the team having access to training and support on team dynamics. Surprisingly only two of the teams in the study had completed any form of team styles inventory (*eg* Belbin) or other diagnostic tool. Both had found the process useful, if a little late in the day! The team leader of Team E told us:

> *'It was only by chance that a senior project manager elsewhere jokingly commented that we needed more 'finishers'. I'd told him of our habit of opening up too many avenues for us to ever pursue fully. I got hold of a copy of the basic questionnaire and things from the Training people and we had a go. It was quite illuminating in revealing some of our weaknesses as a team. More importantly, it gave us a language to describe the kinds of behaviour we expected from one another.'*

Task allocation

In the literature, the concept of negotiated integration explores how it might be possible for team members to retain their diverse individualities while simultaneously collaborating successfully (Northcraft, 1995). In real life terms, the experience of

Figure 4.3: Experience of the team process



Source: IES

participating teams suggests that integrating diverse skills and knowledge means assigning each team member to an aspect of the task for which they are particularly qualified or motivated. For more than one team leader this lesson had been learnt only after some expensive mistakes arising from a failure to recognise and respond to team members' strengths and weaknesses.

The cross-functional teams all comprised individuals from many different hierarchical levels or grades in the organisation. Usually this was by design, given the nature of the task and experience required completing it. Sometimes it was a consequence of the reticence of 'home' functions releasing senior staff for a prolonged period and replacing them with more junior 'representatives.' In any event, whilst there was an acceptance that tasks would be allocated commensurate with experience, the cross-functional teams in our study appeared to thrive on an apparent absence of hierarchy. Individuals repeatedly told us of the enormous sense of satisfaction they gained from being able to contribute as equals.

It is important for individual members to alert the team to their skills and motivation to undertake different roles early on. In a cross-functional environment it is largely unavoidable that people will make assumptions about an individual representative's contribution, given their prior experience of the function/ speciality from which they originate.

Operating principles and values

The most effective cross-functional teams appeared to achieve a balance between performance of tasks and building supportive and trusting relationships within the team. They demonstrated operating principles such as:

- developing a set of commonly held beliefs, values and purpose. For example, teams typically placed great store in honesty and openness. Each had a story to tell of a misplaced team member who was unable to give an honest appraisal of progress or admit to mistakes.

  'Such behaviour is unacceptable in a team environment', explained one team leader, *'simply because it becomes insidious and all-corrupting. We rely heavily on honesty even if it means revealing the truth about inefficient work practices back home.'* Team Leader, Team D

Similarly, in another team, the strength of their shared no-blame culture and ability to confront and resolve problems quickly only became apparent to members following a difficult period working alongside an external IT consultancy. The team were shocked at what they described as *'a failure to be up-front about what's going on, to come clean about the real story on delivery times etc. and just let us work together to sort it out.'*

- commitment to a high level of communication amongst the team members. A variety of forums were used to both review the team's progress in relation to its objectives, but also more general sessions in which news on the wider organisation was shared and implications for the team's dependencies discussed. All the teams stressed the importance of openness to hearing all views, with individual members feeling they have freedom of expression and that their contribution will be appreciated.

- healthy group dynamics – a prerequisite for team learning. When asked 'what is the most serious thing that could go wrong in your team?', many people told us it would be a breakdown in relationships between core team members. The notion of 'work hard, play hard' was particularly important to some teams. Social time together serving as an opportunity to resolve differences and strengthen understanding of one another. Elsewhere the 'peacemaker' role of an individual member was alluded to, *ie* someone who had the insight to air and relieve any interpersonal friction quickly before it had time to affect the team's performance. Only a handful of team members had received any formal exposure to 'conflict resolution' training. All were positive about its help in developing their skills to depersonalise issues arising within the team. Most interviewees were only able to recognise retrospectively the potential for learning from the conflicts arising from differences in the team. None of the teams had ever consciously developed a process for confronting differences.

- development and maintenance of mechanisms for capturing learning. With one or two exceptions, teams struggled to find and make good use of any formal organisation-wide processes and mechanisms for project reviews, and for individuals' performance appraisal and development reviews. Other teams had more success with their own informal mechanisms for reviewing their achievements and failures as potential sources of learning. Building in opportunities for reflection was seen to be critical – even if it was most likely to happen in the pub after work!

In Team C, performance reviews are a strong mechanism for discussing roles and skills in the project. Individuals draw up their own objectives — both personal and project based — with the support of both the project and review manager (see Section 5.7). At the end of the project, a review takes place and feedback information is gathered from clients and other consultants. The review manager appraises the project manager who in turn appraises the consultants. At the end of the project, the learning leader completes a competency assessment form (13 competencies) on each individual. In addition, each individual has a PDP looked at by themselves and their learning leader every six months. This includes both learning and career aspirations.

Information technology

There are many and varied forms of virtual communication available to teams. All the case studies had access to either email, Lotus Notes or some other project database. In Team C, a major investment had been made in creating an infrastructure of learning materials as part of their commitment to becoming a knowledge management business. There is a large electronic library of topic-based dialogues on-line, copies of previous client reports, and circulars updating defined 'skill centres', *ie* groups of people with shared specific interests.

Team D also had other more sophisticated forms of GroupWare or an Intranet available. The latter theoretically enables anyone to comment on the project and to create an ongoing 'bulletin board' in which all team members can interact and add their own thoughts on any issue at any time. In reality day-to-day activities were run through meetings, fax, e-mail and telephone. The IT system was used primarily to record key events, decisions *etc.* at a later date for formal reporting purposes. Capturing the work done and the thinking that went into it by the team was seen as a time-consuming burden, and duplication of work already done through the more traditional communication methods. Consequently it was little used other than by the external consultants on the team.

Recent research by Scarbrough and Swan (1999) found that innovative GroupWare tools were not exploited by users who preferred to continue doing their work 'below the line'. This reticence is because although working in a more transparent and open arena offers opportunities to co-ordinate work more

effectively, or even to showcase individual achievements, it also raises fears about the possibility of surveillance and management control. Like the case studies in Scarbrough and Swan, the team members of Team D expressed some concerns about their privacy and a degree of discomfort in making public their thoughts and ideas. They preferred to share their perspective on an issue with trusted colleagues within the team first.

4.4 Individual context

The individual's own prior experience and attitudes towards working in a cross-functional team must also have an impact on any learning achieved. But in what ways?

Prior experience

More than one-third (17) of the survey respondents had been a member of a cross-functional team before. An individual's experience of cross-functional working influences to some extent what they learn most. For relatively junior staff, team membership was an opportunity primarily to enhance their organisational awareness. For more senior managers, a new challenge of working across boundaries was, often unexpectedly for them, likely to develop softer skills associated with personal effectiveness and self awareness.

One might expect that individuals who had been a member of a similar team would have a more positive view of the team experience, being better able to influence various aspects of the teamworking process. Surprisingly, however, amongst the survey respondents those with prior cross-functional experience were the most negative. Their comments suggest that individuals become more critical when they see the same fundamental mistakes being made time and again.

Motivation

As was discussed earlier in this paper, team members have very varied expectations of what team membership will offer them. Whatever the route to joining such a team, once there the environment is a stimulating one. Forty-three of the 50 survey

respondents told us that their own personal motivation encouraged or strongly encouraged their learning.

Skills as a learner

Cross-functional teamwork certainly appears to have the potential to develop team members' learning skills and their move towards becoming independent learners. Such teams are often 'close to the heat' and members feel particularly stretched. This can make notions of reflection, discussion, planning and action attractive in theory but almost impossible in practice. Those most aware of their learning and development were conscious, however, that they had from time to time worked hard to take time out to think things through. Several individuals who had, earlier in their careers, undergone psychometric tests, *eg Myers Brigg* or, in one case *Mumford's Learning Styles*, had returned to them for greater self-insight.

4.5 Summary

On the previous pages we have outlined some of the key contextual factors that directly impact upon a team's effectiveness and the conditions for learning. By way of conclusion, we summarise below some of the specific influences on learning:

- explicit consideration of learning for the individual and the organisation before, during and after the team 'experience'
- attitude of 'home function' and interaction across boundaries with the organisation
- diversity within the team and autonomy to organise the work of the team
- degree of close working and interaction
- using team processes for learning and honest discussion of difficulties.

In the next chapter we discuss, in practical terms, who should do what to maximise the potential of cross-functional teamwork for individual and organisational learning.

5. Realising the Potential

This study raises numerous issues for employers who wish to fully exploit the potential of cross-functional teamwork for both individual and organisational learning. In this final chapter we offer some practical guidance to increase both performance and learning.

5.1 Roles and responsibilities

Players

There are multiple players in the effectiveness of any cross-functional team, especially so, it seems, in teams that wish to develop their learning capability. They include:

- team members (core and peripheral)
- team leader or project manager
- senior project/team champion or sponsor
- line manager of an individual team member
- specialist 'project' management resource, *eg* Director of Projects, or senior managers with responsibility for knowledge management, *eg* Chief Knowledge Officer
- members of a corporate or local HR function.

A particular strength of Team C's organisation is that it has rethought 'management' to make it more appropriate to a project environment. They recognised that it was almost impossible to create and maintain perfect processes and systems for knowledge management. Personal networks were highlighted as the key and a great deal of effort has gone in to creating defined roles for managing learning via projects. They include the:

'learning leader'. This is effectively the individual's line manager. Learning goals are agreed explicitly at the start of the project, revised as need be, and reviewed at the end of the project. There are 12 to 16 learning leaders for 90 consultants. Even an experienced person would see their learning leader every two to three weeks.

project manager. The project manager has responsibility for delivery of the project but also for coaching. They report to a senior 'review manager' on a weekly basis.

review manager. This is a senior management role that ensures the quality of the project. They manage the relationship with the client and the quality of the output of the project. Projects often have both a business client and senior sponsors in the business, which can lead to some difficult political issues. They are the people most likely to capture high-level lessons learned from particular projects. In Team C, where there had been gaps between project leaders, the review manager had helped keep the project on track.

resource manager. Resource managers allocate people to projects and inform the project manager about who is around. In discussion with the review and project manager they consider both skills and development needs in staffing the team. They can appoint the project manager. The resource manager also plays an important role in directing individuals to 'people who know about X' during the course of a project, because they know people well.

Roles

Between them, the different players can fulfil a variety of roles that either help or hinder a team. From our observations in the IES study, the key five roles someone needs to be undertaking are:

- resourcing or allocation of talent and skills to teams and their re-entry to the 'mainstream' organisation
- coaching and learning support to individual members
- facilitating relevant team development and training in, for example, team dynamics or project management
- realigning HR systems, *eg* reward, performance appraisal, skills frameworks
- developing the team as a 'learning community' and transferring knowledge gained to the rest of the organisation.

Each is discussed in turn below.

5.2 Resourcing

Selecting the real 'team players'

In shaping the most effective team, care must be taken with resourcing. Whilst the availability of scarce skills for some job families or key roles can be an issue, it is still important to select for soft skills as well as functional expertise.

Too many team leaders have neither the time nor the inclination to make an assessment of an individual's skill and ability for cross-functional work. But reverting to generalised platitudes of a 'team player' can mean falling foul of those candidates who are adept at playing the game. In other words, it is easy for candidates to describe themselves as *a good team player* but not to possess group problem-solving techniques.

HR can support them by:

- making available biodata including, for example, previous cross-functional team experience. This does, however, rely on basic records of such experience being retained on any computerised personnel information system (CPIS).
- advising when more than personality traits are worth investing in. For example, development centre exercises which include group problem-solving exercises.
- ensuring that the team leader is aware of who within the organisation they might talk to in finalising their person specification and selection choice.

Reluctant releases

There will undoubtedly always be some reluctance among a minority of line managers to release their star players to a team. Clearly defining the objectives for the individual's involvement and, if possible, specifying a time period, are helpful. Teams often benefit from calling in other resources for specific tasks without these people necessarily becoming part of the core team. Whatever the new member's status, their line managers benefit from an appreciation of the importance of the individual's contribution, and, hopefully, a sense of regaining new insights and skills on the individual's return.

Managing re-entry

Returning to normal work can seem less rewarding than a stimulating project. Cross-functional working often opens an individual's eyes to many other career options, often outside of their current employment. Re-motivating and retaining former team members requires timely and two-way negotiation of their return to the 'mainstream'. For example:

- never ignore people's increase in capability if placing them back in a job at the same level as before. They are unlikely to accept or stick with it for long.
- be aware also that promotions during participation in a big project can effectively price individuals out of the internal labour market
- notional time limits for people on major projects (*eg* two years) is one option for easing re-entry
- individuals need personal support in finding a suitable post at the end of a major project. For some, time with their former line manager will be sufficient. For others, independent advice from a third party is more valuable. Career planning workshops are worth considering.

5.3 Coaching and learning support

Cross-functional team experience is a powerful opportunity for self-development, even for those employees who commence membership with little or no learning intent. As with any form of development, however, individuals need coaching and support to establish and review learning objectives. This should be both from within the team and outside of it.

It is something of a paradox that the best way to develop the skills of effective teamwork is to be a member of a cross-functional team, but their membership is rarely reviewed with individuals as a developmental experience. Those responsible for management development should make the effort to review the popularity and impact of cross-functional teamwork within their organisation, and then develop a programme of support.

One particular benefit of a developmental review during or at the end of a team experience, would be about consciousness raising. In other words, the kinds of skills and capabilities cross-

functional experience equips employees with (*eg* systems thinking, collaborative enquiry, influencing diverse others, building a shared vision) are those which are frequently cited as critical to an organisation's ability to manage change, and exploitation of intellectual capital. However, they are not necessarily skills which are immediately obvious to those who have just acquired them, as transferable knowledge which they can apply again or transfer to others. Participants on a communications skills course will know they have had an opportunity to develop their ability to, say, give a presentation. It is far less black and white to the member of a cross-functional team who has spent the last six weeks badgering the Marketing Department for information, that they have learnt many of the skills of collaborative enquiry.

Coaching can also be invaluable in helping individual members to resolve difficulties associated with multiple loyalties, *ie* resolving their need to contribute to the shared goals of the team when their primary loyalty may still be to their function or profession.

Although the team leader cannot always maintain the impartiality of a coach, they can be made more aware of the impact of their leadership on individual members. For example, the appropriateness of the roles that people with varying degrees of confidence *etc.* are given is important, as is the establishment of operating principles that value each member of the team for the contribution they can make. Many team leaders would welcome more support in developing a better appreciation of how they can build and maintain the right team dynamics.

5.4 Facilitating team development

- Team members should be co-located whenever possible, to maximise the opportunity for informal exchange of knowledge and skills. The notion of virtual teams who communicate predominantly through electronic means, presents some tough challenges for team learning.
- Teams need stability of membership, and time to coalesce. The longer a team has been together, the greater the opportunities for that team to have progressed through cycles of reflection and action and to have developed a shared history and capacity for new insights.

- Effective cross-functional teams operate under conditions that promote genuine trust, curiosity and shared responsibility. Teams help generate such environments by paying adequate attention to team dynamics and the integration of diverse contributions. It isn't enough to know about the ways in which effective teams develop and function. More of an issue is ensuring teams have access to the right tools and facilitation at the right time. Many organisations have invested heavily in project management training and related resources. HR should take care to ensure these include sufficient help on some of the 'softer' people issues, and that team leaders are aware of how to get hold of them. Wherever possible, keep in touch with key cross-functional teams and use their learning to publicise the value of any developmental exercises they undertake.

5.5 Realigning HRM systems

Reward

The pay and reward structures of any organisation are hard stretched to keep pace with the changing realities of the demands made of people and jobs. Good teamwork can be enhanced by the right reward system, but the take-up of formal team-based pay structures amongst the case studies was limited. Most preferred to use discrete bonuses as a culture-building device and symbolic recognition of contribution, rather than as a reward aimed at directly influencing behaviour. Each of their schemes was unique but some clear messages did emerge:

- The most effective team rewards are a function of management and culture more than money. Extrinsic non-financial rewards for teams include positive feedback, praise and recognition. Recognition in in-house magazines, at special events such as a management conference, and the chance to represent the company at a major international event, were some of the rewards valued by those interviewed. Intrinsic rewards are self-generated and potentially longer lasting. A sense of accomplishment, scope to use their skills and abilities, interesting/challenging work and a proper degree of autonomy, were all non-financial rewards team members associated with their experience.
- The type of team must influence the choice of team reward. The most appropriate form of team pay for cross-functional project teams and *ad hoc* task forces is often judged to be cash bonuses

(as a percentage of base salary) payable on completing the project to time/budget *etc.* Interim 'milestone' payments may be made at pre-determined stages in the project.

- Sticking with an individual PRP scheme is a popular option that can support collaborative teamwork, if teamworking competencies are included in the performance management process/job evaluation scheme and rewarded accordingly.
- Promoting highly valued team members through existing pay scales runs the potential risk of pricing members out of returning to the line.
- Don't forget that for every individual seconded to a team there may well be someone covering their work back in the home function. Adequate recognition for these peripheral team players is important.

Performance appraisal

Making a fair assessment of an individual's contribution and establishing unambiguous goals for the future is a struggle in most contexts. Some argue that the disciplines of effective project management in a team-based environment make the process both more necessary and also easier. Points to watch out for include:

- Review performance dimensions and/or competencies to include cross-functional teamwork capabilities.
- Determine what is being measured: the performance of the individual or the performance of the team, and resolve how the two are linked. Set overlapping or interlocking objectives for people who have to work together.
- Team leaders should help the team establish for itself their own specific short-term objectives, with the framework of broader corporate and functional objectives, and define the measures they will use to monitor their own performance.
- Clarify roles and responsibilities in the appraisal process. The general consensus of the individuals in this study was that appraisal is best left as the responsibility of the line manager, providing that there is an adequate contribution made by the team leader.
- A peer performance review system has the advantage of being a shared process which can provide team members with a better appreciation of their level of performance in the team, from

colleagues who are well placed to observe and assess how they are doing. Peer reviews can be stressful, however, and team members must have a high degree of trust in one another.

- Establish and review objectives and goals for learning and development gained during the team experience.

5.6 Career management/planning

Cross-functional teamwork highlights the importance of robust and responsive career management systems.

- At a strategic level we see many more employers taking seriously: the definition of the main skill families needed by the business; monitoring of where the scarce skills are; and centrally managing the deployment of those skills across competing business needs. This kind of role increasingly fills the domain of specialist project or programme directors.
- For some, the threat to professional competence is perceived as a possible downside of cross-functional working. Who should oversee the professional/functional development of people working in dispersed teams?
- Development specialists and those planning the careers of high potentials and others, need to know from where, and for whom, opportunities for cross-functional experience might arise. Similarly, those with cross-functional experience want to explore with someone their new mobility opportunities.
- It is a good idea to review retention management strategy for all team-based staff who may be at risk of taking their newfound skills elsewhere.

5.7 Organisational learning and knowledge management

At the outset of this research we were interested in the notion of cross-functional teams representing the front-line of knowledge management. We have seen through the case studies that the kind of synergistic team learning that generates new organisational knowledge requires commitment, attention and continual investment of resources. However much is invested in supporting the teams themselves, they are directly influenced by the cultural context in which they operate. Consequently, maximising the learning potential from every project or cross-

functional collaboration is a question of leading and managing change throughout the whole organisation.

It takes time to build up organisational norms re-creating and sharing knowledge and learning. Some practical points to bear in mind along the way include:

Leadership

- Even the most experienced managers can be unsure what their role is as the sponsor or champion of a cross-functional project. To date, only very few organisations have adopted formal roles for high level managers such as Chief Knowledge Officer (*eg* as in Hewlett Packard) or the Director of Shared Learning (*eg* BPAmoco). Most, however, would benefit from an opportunity to explore at the outset what they could do to support the team's success. This should include some pointers on how to actively support the capture and 'cross-pollination' of learning across the organisation.
- In an effective cross-functional team there is every likelihood of people surfacing what Agyris (1993) called 'the potentially embarrassing information that might produce real change'. The anti-learning forces in any organisation are powerful. The team needs coaching and support if they are to understand and work with those who would prefer to maintain the status quo.
- The perceived value to individuals, and to the business, of any cross-functional initiative, has a knock-on effect on the organisation's future willingness to commit to new ways of doing things, and the sharing and creation of knowledge. Similarly, the organisation's memory of even major projects can be remarkably short. There is an important role for senior managers or project sponsors as, what Senge (1996) called, 'learning historians'.

Trust

- Trust is a precondition to openness within the team. Sharing one's knowledge, especially if exposing the potential shortcomings of one's home function/profession, is an anxious business. Without trust, anxieties and concerns about what will be received in return can make us reluctant to part with what we know. Social time taken by the team to 'get to know one another', particularly early on in the team's development, is time well spent.

- Trust is not a panacea for knowledge sharing and creation (Scarbrough and Swan, 1999). Trust based on reciprocity between individuals – the 'you scratch my back' kind of trust – may be more effective than friendship-based trust in encouraging the open exchange of knowledge. Team leaders must guard against any over-reliance on friendships, as this could inhibit the development of more formal project controls and the management of poor performance.

Communities of practice

- Whatever the strength of the team, individual members will undoubtedly have their own social and 'virtual' networks within the organisation. It is through these relationships with others that share a common interest, that much of the 'learning' will be transferred. Team leaders should encourage individuals to maintain their networks outside of the team. Cross-functional teams can become important communities of practice in their own right. They are also, however, made up of potential contributors to many other communities, throughout the rest of the organisation and even outside with strategic partners, suppliers *etc*.
- Project reviews rarely record the kind of narrative lessons underlying sources of difficulty or success that might safeguard the same mistakes being repeated in future initiatives or by other teams. Rather than attempting to commit experience to a database, why not promote the team as a learning community whose members are available for others to talk to. Teams can be encouraged to regularly present aspects of their work to their line managers and colleagues as well as their senior sponsors. This can be particularly beneficial for new team leaders who would value pragmatic advice based on experience.
- It can be very helpful for the organisation to adopt a common language wherever possible. For example, those who pursue the TQM route invariably adopt a common problem-solving process with defined stages and tools (*eg* Pareto charts, Six-sigma *etc*.). Via training or through seeing such techniques used in practice, individuals employees, whatever their background, can at least talk in the same language about the resolution of issues. It also offers a framework in which teams throughout the organisation can present and interpret each other's work.

Project-based learning

- Learning is not the prime motivation for having teams. So learning may not be thought about very much by either the organisation or the individual. Just asking questions about learning at the start of the project/team would be helpful.
- Surprisingly few project management training modules include explicit guidance on learning. It is worth reviewing their content from this perspective. One company known to IES has now issued additional guidance for new project teams on thinking about learning in terms of three main steps: (1) Learn before doing: find the best known way it has been done elsewhere so far; (2) Learn while doing: adapt the teams collective knowledge to the task at hand; (3) Learn after doing: decode what you learnt and capture it.
- Effective teams build in opportunities for reflection and benefit from a 'warts and all' review, recording lessons learnt for future initiatives. Project reviews at fixed milestones during the project can be broadened to embrace lessons learnt other than those concerning the task in hand. In effect, these create team review processes as well as project reviews. Questions to ask might include: How well are we operating? Are we learning from each other? Do we have knowledge gaps we need to fill?
- Building an open library – electronic or otherwise – of project reports, resources and team members is a relatively inexpensive investment for any organisation in which project working is becoming more prevalent.

Information technology

- Virtual communication via IT (*eg* email, GroupWare, teleconferencing *etc.*) is no substitute for meetings. Teams create new knowledge and insights through sharing their different perspectives and basic assumptions. Realistically, this can only be done via face-to-face interaction.
- Much of the really valuable knowledge held within organisations is tacit, *ie* knowledge which cannot be communicated, understood or used without the 'knowing subject'. Tacit knowledge evolves from interactions between people, and requires skill and practice. For example, intuitions and hunches are a form of tacit knowledge and cannot easily be expressed. Demanding that a team attempt to codify and

capture everything they learn is likely to result in knowledge which is useless, irrelevant, trivial or politically naïve, *etc.*

- Explicit knowledge can be captured and shared via IT, but individuals and teams will need the skills and the time to write it up. With the popular Lotus Notes system, for example, users are required to specify when a decision was made, how, why and so on in a fairly formal way.
- Organisational knowledge needs to be rendered 'public' in order to be shared. However, GroupWare systems and intranets can effectively eliminate private work spaces and will be resisted by team members who may wish to share their thinking with some but hide it from others for fear of being judged *etc.* Similarly, teams and individuals can choose to use them as a vehicle for impression management – recording only the positive or volumes of relatively useless information. Employers looking to implement GroupWare or intranet systems must take into account how such tools will be used and adapt them accordingly.

As Scarborough and Swan (1999) conclude 'knowledge management is about process rather than systems and it is the characteristics of the process – the different ways the tools are used – rather than the characteristics of the system, which are crucial to success'.

5.8 Evaluation

Unfortunately, too few corporate HR functions are well informed enough to know exactly whether or not cross-functional teams scattered around the organisation are as effective as they could be, and are receiving the right organisational support. No-one would want to repeat the scenario of the HR Director in case study H who was unaware of the existence of a small but key project team of highly valuable individuals until he was called in the last weeks of the team's existence to try, unsuccessfully, to persuade several members to remain with the organisation.

Monitoring and evaluation processes should aim to find out:

- the extent of cross-functional teamwork throughout the organisation, *ie* who and where are the key teams
- the opinions of line managers, team leaders and team members about their team experience

- what improvements in performance have resulted from cross-functional teamwork
- what problems have been encountered
- how best HR can support those concerned to overcome problems
- what the real opportunities for employee and management development through cross-functional experience are
- how individual learning gained in this way can benefit future teams and the organisation as a whole.

A simple cross-functional team's audit, such as the one developed by IES as part of the methodology for this research, obtains employee and management views through attitude surveys, individual interviews, and focus groups. Careful analysis of the resulting data can quickly reveal where to concentrate efforts in maximising the huge potential of effective cross-functional teamwork.[1]

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[1] For more information contact Polly Kettley or Wendy Hirsh at IES on Tel. 01273 686751 or email: consultancy@employment-studies.co.uk.

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Learning from Cross-functional Teamwork

P Kettley, W Hirsh

Cross-functional teams are typically composed of individuals who have specialised knowledge and manufacturing, perceived client needs etc but who work collaboratively to solve complex challenges requiring input from different functional areas. They confront a different set of performance expectations than conventional work groups and are often expected to create knowledge and disseminate 'best-practice'. Issues of interpersonal trust and unconscious social processes are key factors in their success. Cross-functional teams offer employers great potential rewards - their diversity of functional specialities, viewpoints and cultures is prized for the creative contribution to organisational learning and knowledge management. This report provides an understanding of the learning process within such teams and the influence of factors such as team composition, task allocation, operating principles and values, and the support of the rest of the organisation.

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